

responses detailed above for breast cancer patients. That is, the patients had immunogenic neoplasms.

It is understood that the examples and embodiments described herein are for illustrative purposes only and that various modifications or changes in light thereof will be suggested to persons skilled in the art and are to be included within the spirit and purview of this application and scope of the appended claims.

I claim:

1. A cancer immunotherapy method for treating cancer in a patient comprising:
  - a. vaccinating a patient with a vaccine comprised of the patient's own malignancy and an immunologic adjuvant;
  - b. removing primed peripheral blood T lymphocytes from the patient;
  - c. stimulating the primed T lymphocytes to differentiate into effector lymphocytes in vitro;
  - d. stimulating the effector T lymphocytes to proliferate in vitro; and
  - e. infusing the effector T lymphocytes back into the patient.
2. The cancer immunotherapy method in claim 1 wherein the immunologic adjuvant is GM-CSF.

3. The cancer immunotherapy method in claim 1 wherein the removal step is performed by leukapheresis.

4. The cancer immunotherapy method in claim 1 wherein the differentiation step is performed using anti-CD3.

5. The cancer immunotherapy method in claim 1 wherein the proliferating step is performed using IL-2.

6. The cancer immunotherapy method in claim 1 wherein the cancer immunotherapy is directed to the treatment of breast cancer.

7. The cancer immunotherapy method in claim 1 wherein the cancer immunotherapy is directed to the treatment of astrocytoma.

8. The cancer immunotherapy method in claim 1 wherein the cancer immunotherapy is directed to the treatment of renal cancer.

9. The cancer immunotherapy method in claim 1 wherein the patient is vaccinated at multiple body sites.

10. The cancer immunotherapy method in claim 1 wherein the patient is treated at the time of initial diagnosis.

11. The cancer immunotherapy method in claim 1 wherein the patient is treated immediately following surgical removal of cancer.

12. The cancer immunotherapy method in claim 1 wherein the patient is treated with subpopulations of activated peripheral blood T lymphocytes.

13. A method of manufacturing a composition comprised of effector T lymphocytes generated by:

- a. vaccinating a patient with a vaccine comprised of the patient's own malignancy and an immunologic adjuvant;
- b. removing primed peripheral blood T lymphocytes from the patient;
- c. stimulating the primed T lymphocytes to differentiate into effector lymphocytes in vitro; and
- d. stimulating the effector T lymphocytes to proliferate in vitro.

14. The method in claim 13 wherein the immunologic adjuvant is GM-CSF.

15. The method in claim 13 wherein the removal step is performed by leukapheresis.

16. The method in claim 13 wherein the differentiation step is performed using anti-CD3.

5 17. The method in claim 13 wherein the proliferating step is performed using IL-2.

18. A composition comprised of effector T lymphocytes made by the process of:

a. vaccinating a patient with a vaccine comprised of the patient's own malignancy  
and an immunologic adjuvant;

10 b. removing primed peripheral blood T lymphocytes from the patient;

c. stimulating the primed T lymphocytes to differentiate into effector lymphocytes in  
vitro; and

d. stimulating the effector T lymphocytes to proliferate in vitro.

15 19. The method in claim 18 wherein the immunologic adjuvant is GM-CSF.

20. The method in claim 18 wherein the removal step is performed by leukapheresis.

21. The method in claim 18 wherein the differentiation step is performed using anti-CD3.

22. The method in claim 18 wherein the proliferating step is performed using IL-2.

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